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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,459	08/23/2001	Charles P. Norman	ST00015USU	2229

7590 12/14/2004  
THE ECLIPSE GROUP  
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EXAMINER
CHANG, EDITH M

ART UNIT	PAPER NUMBER
2637	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/938,459	<b>Applicant(s)</b> NORMAN, CHARLES P.	
	<b>Examiner</b> Edith M Chang	<b>Art Unit</b> 2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2001.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Feb 06 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because Reference character "120" has been used to designate both Comb Filter and signal. In FIG.2B, the numeral 120 is defined in FIG.1 as the Comb Filter, a device not a signal. Change the 120 in FIG.2B to a numeral reflects a signal.

Reference character "132" has been used to designate both FFT in element 106 of FIG.1 and the duplexer in element 102 of FIG.1.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(n) and 1.84(o) because the block 132 in element 102 of Fig.1 need to have a descriptive label.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities:

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Page 4 line 5, "FIGs. 2A-2H illustrates the operation of the present invention" is objected to because the FIGs 2A-2H are the spectrums of the different signals of FIG.1. Replace the line 5 with separate lists if FIG 2A to FIG.2H with its short description described in the specification pages 7 to 8 under the BRIEF DESCRIPTION OF THE DRAWINGS.

Page 7 line 12, "the remote unit 104" is objected to because the numeral 104 is described in page 6 line 18 as the radio link.

Page 8 line 22, "mixer 154" should be "mixer 156".

Appropriate corrections are required.

### ***Claim Objections***

4. Claims 1-4 are objected to because of the following informalities:

Claim 1, line 5: "a" is suggested changing to "the".

Claims 2-4 are dependent on the objected claim 1.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3, line 2: "the GPS receiver" lacks antecedent basis.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDoran et al. (US 5,757,916) in view of MacDoran et al. (US 4,797,677) .

**To claim 1**, in Fig.1 of '916, MacDoran teaches a host authentication server (element 150) as the GPS receiver to receive a signal sending from the remote client authentication means (element 140) via a communication channel 109, the location signature sensor (LSS element 103) of the remote client authentication means receiving GPS signals from GPS satellites. The LSS element 103 is detailed in Fig.4 (column 3 lines 10-15), wherein the C/A channel spectral compressor (delay and multiply) (element 404 REF: U.S. PATENT 4,797,677 in Fig.4) compressing the C/A signals received from the GPS satellites.

Since the MacDoran ('916) suggests the C/A and P channel spectral compressors (delay and multiply) taught in U.S. Patent 4,797,677 by MacDoran ('677), hence at the time of the invention, it would have been obvious to one of ordinary skill in the art to have the channel spectral compressor (delay and multiply) Fig.3 of '677 implemented in the GPS SENSOR LSS (404 FIG.4 '916) suggested and taught by MacDorna for the purpose of providing an accurate, nonambiguous measurement of pseudo range (column 2 lines 35-40, lines 60-62). The modified/combined apparatus and its method teaches

In Fig.3 of REF: U.S. PATENT 4,797,677

*removing* the carrier component ( $L_1 / L_2$ ) of the received GPS signals from antenna 30 by the multipliers 44 and 80;

*matching* a comb filter (element 62, or 72) to the received GPS signals inputted to the multiplier 68 (column 6 lines 32-40), where the received GPS signals comprises filter lines (the GPS signals shown as filter lines in spectrum); and

*frequency shifting* the received GPS signals inputted to the multiplier 68, with the comb filter to produce a compressed signal of the filter lines at the output of element 72.

Wherein the received GPS signals are separated from each other by a comb filter (elements 62, or 72 Fig.3 '677) stated in column 11 lines 15-20; and the delay elements and the multipliers of Fig.3 with the bank of comb filters comprised in the channel spectral compressor (delay and multiply) (404/405 Fig.4 '916) compress the GPS signals.

**To claim 2**, further in Fig. 3 of '677, the modified/combined MacDoran's method teaches frequency shifting the compressed signal at the output of element 72 by the frequency produced by the frequency synthesizer 40 to provide a second compressed GPS signal at the output of 74.

**To claim 3**, in Fig. 1/Fig.4 of '916, the modified/combined MacDoran teaches *sending* a signal from the GPS satellites at a remote location to the client authentication means (140/400) via a wireless link (102/401);

*applying* the signal received from the GPS antenna 401 to the comb filter of element 404 (element 72 of Fig.3 '677) inputted to the multiplier 68, then the signal inputted to the comb filter shifts the output of the comb filter to an expected location in spectrum.

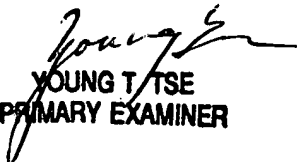
**To claim 4**, in Fig. 3 of '677, the modified/combined MacDoran teaches shifting the output signals at the output of element 72 (the filter lines) by mixing at least one output of the frequency synthesizer 40 (as a frequency generator) to provide a compressed GPS signal at the output of the multiplier 74.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M Chang whose telephone number is 571-272-3041. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayanti Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edith Chang  
December 7, 2004

  
YOUNG T. TSE  
PRIMARY EXAMINER